

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/568,337
Source: FWP
Date Processed by STIC: 2/23/06

ENTERED



IFWP

RAW SEQUENCE LISTING

DATE: 02/23/2006

PATENT APPLICATION: US/10/568,337

TIME: 08:02:48

Input Set : E:\61312.us.sequences.ST25.txt

Output Set: N:\CRF4\02232006\J568337.raw

```

3 <110> APPLICANT: Windisch, Jorg
4     Schoergendorfer, Kurt
5     Palma, Norbert
6     Knauseder, Franz
7     Boehling, Hans
9 <120> TITLE OF INVENTION: Expression vectors, transformed host cells and fermentation
10    process for the production of recombinant polypeptides
12 <130> FILE REFERENCE: BP/G-33314 LNG 61312.US
C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/568,337
C--> 14 <141> CURRENT FILING DATE: 2006-02-13
14 <150> PRIOR APPLICATION NUMBER: PCT/EP2004/009067
15 <151> PRIOR FILING DATE: 2004-08-12
17 <150> PRIOR APPLICATION NUMBER: US 60/494,914
18 <151> PRIOR FILING DATE: 2003-08-13
20 <160> NUMBER OF SEQ ID NOS: 19
22 <170> SOFTWARE: PatentIn version 3.3
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 495
26 <212> TYPE: DNA
27 <213> ORGANISM: Artificial
29 <220> FEATURE:
30 <223> OTHER INFORMATION: DNA encoding human interferon alpha 2B with altered codon
usage
32 <400> SEQUENCE: 1
33 tgcgatctgc cgcaaaccca cagcctgggt agccggcgaa ccttgatgct tctggcacag      60
35 atgcggcgaa tctctctttt ctcttgctta aaggatcgac atgacttcgg tttcccgag      120
37 gaggagttcg gtaaccagtt ccaaaaggct gaaaccatcc cggattgca tgagatgatc      180
39 cagcagatct tcaacctgtt cagcactaag gactcttctg ctgcttggga tgagaccctg      240
41 cttgacaaat tctacactga actgtaccag cagctgaacg acctggaagc ctgcgtgatc      300
43 cagggtgtgg gtgtgactga gactccgctg atgaaggagg actctattct ggctgtgcga      360
45 aaatacttcc aacggatcac tctgtatctg aaagagaaga aatacagccc gtgcgcctgg      420
47 gaggttgtcc gagcagaaat catgcggtct ttctctttgt ctaccaactt gcaagaatct      480
49 ttacgaagca aggaa                                         495
52 <210> SEQ ID NO: 2
53 <211> LENGTH: 27
54 <212> TYPE: PRT
55 <213> ORGANISM: Pseudomonas diminuta
57 <400> SEQUENCE: 2
59 Met Leu Arg Val Leu His Arg Ala Ala Ser Ala Leu Val Met Ala Thr
60 1           5           10           15
63 Val Ile Gly Leu Ala Pro Ala Val Ala Phe Ala
64           20           25
67 <210> SEQ ID NO: 3
68 <211> LENGTH: 81

```

RAW SEQUENCE LISTING

DATE: 02/23/2006

PATENT APPLICATION: US/10/568,337

TIME: 08:02:48

Input Set : E:\61312.us.sequences.ST25.txt

Output Set: N:\CRF4\02232006\J568337.raw

```

69 <212> TYPE: DNA
70 <213> ORGANISM: Pseudomonas diminuta
72 <400> SEQUENCE: 3
73 atgctgagag ttctgcaccg ggcggcgctcc gccttggtta tggcgactgt gatcggcctt      60
75 ggcggcgccg tcgcctttgc g                                     81
78 <210> SEQ ID NO: 4
79 <211> LENGTH: 81
80 <212> TYPE: DNA
81 <213> ORGANISM: Artificial
83 <220> FEATURE:
84 <223> OTHER INFORMATION: DNA encoding signal sequence of gac gene of Pseudomonas
diminuta
85         with altered codon usage
87 <400> SEQUENCE: 4
88 atgctgagag ttctgcaccg ggcggcgctcc gccttggtta tggcgactgt gatcggcctt      60
90 ggcggcgccg tcgcctttgc g                                     81
93 <210> SEQ ID NO: 5
94 <211> LENGTH: 100
95 <212> TYPE: DNA
96 <213> ORGANISM: Pseudomonas diminuta
98 <400> SEQUENCE: 5
99 atcctggttc gtacgcgccg cctacaagtg gtgatctagg ggaacgttcc gggggcgctcg      60
101 ctgcaacggc gtctccggat ctgggtgaga ggggaaatcc                100
104 <210> SEQ ID NO: 6
105 <211> LENGTH: 209
106 <212> TYPE: DNA
107 <213> ORGANISM: Pseudomonas diminuta
109 <400> SEQUENCE: 6
110 tctagaccaa caacatcttc aacgtctacc cgaccaagat tcaggagccg tcggccgacc      60
112 tgggcaatgg gatgtacagc gggcttgccg cgcttcggctt caccggcgga tcctgggtcg      120
114 tacgcgcgcg ctacaagtgg tgatctaggg gaacgttccg ggggcgctcg tgcaacggcg      180
116 tctccggatc tgggtgagag gggaaatcc                            209
119 <210> SEQ ID NO: 7
120 <211> LENGTH: 23
121 <212> TYPE: DNA
122 <213> ORGANISM: Artificial
124 <220> FEATURE:
125 <223> OTHER INFORMATION: Oligonucleotide, PCR primer
127 <400> SEQUENCE: 7
128 taactgtcag accaagttta ctc                                     23
131 <210> SEQ ID NO: 8
132 <211> LENGTH: 20
133 <212> TYPE: DNA
134 <213> ORGANISM: Artificial
136 <220> FEATURE:
137 <223> OTHER INFORMATION: Oligonucleotide, PCR primer
139 <400> SEQUENCE: 8
140 gcgtttcggg gatgacgggtg                                     20
143 <210> SEQ ID NO: 9
144 <211> LENGTH: 23

```

RAW SEQUENCE LISTING

DATE: 02/23/2006

PATENT APPLICATION: US/10/568,337

TIME: 08:02:48

Input Set : E:\61312.us.sequences.ST25.txt

Output Set: N:\CRF4\02232006\J568337.raw

```

145 <212> TYPE: DNA
146 <213> ORGANISM: Artificial
148 <220> FEATURE:
149 <223> OTHER INFORMATION: Oligonucleotide, PCR primer
151 <400> SEQUENCE: 9
152 tcatgtttga cagcttatca tcg                                     23
155 <210> SEQ ID NO: 10
156 <211> LENGTH: 19
157 <212> TYPE: DNA
158 <213> ORGANISM: Artificial
160 <220> FEATURE:
161 <223> OTHER INFORMATION: Oligonucleotide, PCR primer
163 <400> SEQUENCE: 10
164 ggtcgagggtg gcccggtc                                         19
167 <210> SEQ ID NO: 11
168 <211> LENGTH: 36
169 <212> TYPE: DNA
170 <213> ORGANISM: Artificial
172 <220> FEATURE:
173 <223> OTHER INFORMATION: Oligonucleotide, PCR primer
175 <400> SEQUENCE: 11
176 ggggggtcta gaccaacaac atcttcaacg tctacc                     36
179 <210> SEQ ID NO: 12
180 <211> LENGTH: 32
181 <212> TYPE: DNA
182 <213> ORGANISM: Artificial
184 <220> FEATURE:
185 <223> OTHER INFORMATION: Oligonucleotide, PCR primer
187 <400> SEQUENCE: 12
188 ccccccgaat tcaactagtag cggtctctct cc                         32
191 <210> SEQ ID NO: 13
192 <211> LENGTH: 315
193 <212> TYPE: DNA
194 <213> ORGANISM: Artificial
196 <220> FEATURE:
197 <223> OTHER INFORMATION: DNA comprising part of gac gene of Pseudomonas diminuta
199 <400> SEQUENCE: 13
200 ggggggtcta gaccaacaac atcttcaacg tctacccgac caagattcag gagccgtcgg      60
202 ccgacctggg caatgggatg tacagcgggc ttgcgccgtt cggcttcacc ggcggatcct      120
204 ggttcgtacg cgccgcctac aagtggtgat ctaggggaac gttccggggg cgtcgctgca      180
206 acggcgctctc cggatctggg tgagagggga aatccatgct gagagttctg caccgggcgg      240
208 cgtccgcctt ggttatggcg actgtgatcg gccttgccgc cgcgagaga gacgcgtact      300
210 agtgaattcg ggggg                                           315
213 <210> SEQ ID NO: 14
214 <211> LENGTH: 11
215 <212> TYPE: DNA
216 <213> ORGANISM: Artificial
218 <220> FEATURE:
219 <223> OTHER INFORMATION: Oligonucleotide, part of PCR primer

```

RAW SEQUENCE LISTING

DATE: 02/23/2006

PATENT APPLICATION: US/10/568,337

TIME: 08:02:48

Input Set : E:\61312.us.sequences.ST25.txt

Output Set: N:\CRF4\02232006\J568337.raw

```

221 <400> SEQUENCE: 14
222 tcgcctttgc g                                     11
225 <210> SEQ ID NO: 15
226 <211> LENGTH: 23
227 <212> TYPE: DNA
228 <213> ORGANISM: Artificial
230 <220> FEATURE:
231 <223> OTHER INFORMATION: Oligonucleotide, PCR primer
233 <400> SEQUENCE: 15
234 ttgcgcccgc ggtcgccttt gcg                       23
237 <210> SEQ ID NO: 16
238 <211> LENGTH: 4
239 <212> TYPE: PRT
240 <213> ORGANISM: Pseudomonas diminuta
242 <400> SEQUENCE: 16
244 Val Ala Phe Ala
245 1
248 <210> SEQ ID NO: 17
249 <211> LENGTH: 540
250 <212> TYPE: DNA
251 <213> ORGANISM: Artificial
253 <220> FEATURE:
254 <223> OTHER INFORMATION: DNA comprising nucleotide sequence encoding human interferon
255     alpha 2B
257 <400> SEQUENCE: 17
258 gggggggccgc ggtcgccttt gcgtgcgac tgccgcaaac ccacagcctg ggtagccggc      60
260 gaaccttgat gcttctggca cagatgcggc gaatctctct tttctcttgc ttaaaggatc     120
262 gacatgactt cggtttcccg caggaggagt tcggtaacca gttccaaaag gctgaaacca     180
264 tcccgggtatt gcatgagatg atccagcaga tcttcaacct gttcagcact aaggactctt     240
266 ctgctgcttg ggatgagacc ctgcttgaca aattctacac tgaactgtac cagcagctga     300
268 acgacctgga agcctgcgtg atccagggtg tgggtgtgac tgagactccg ctgatgaagg     360
270 aggactctat tctggctgtg cgaaaatact tccaacggat cactctgtat ctgaaagaga     420
272 agaaatacag cccgtgcgcc tgggaggttg tccgagcaga aatcatgcgg tctttctctt     480
274 tgtctaccaa cttgcaagaa tctttacgaa gcaaggaata atacgcgtga attcgggggg     540
277 <210> SEQ ID NO: 18
278 <211> LENGTH: 807
279 <212> TYPE: DNA
280 <213> ORGANISM: Artificial
282 <220> FEATURE:
283 <223> OTHER INFORMATION: DNA encoding fusion protein comprising signal sequence of
gac
284     gene of Pseudomonas diminuta and human interferon alpha 2B
287 <220> FEATURE:
288 <221> NAME/KEY: CDS
289 <222> LOCATION: (210)..(788)
291 <400> SEQUENCE: 18
292 tctagaccaa caacatcttc aacgtctacc cgaccaagat tcaggagccg tcggccgacc      60
294 tgggcaatgg gatgtacagc gggcttgccg cgttcggctt caccggcgga tcttggttcg     120
296 tacgcgccgc ctacaagtgg tgatctaggg gaacgttccg ggggcgtcgc tgcaacggcg     180
298 tctccggatc tgggtgagag gggaaatcc atg ctg aga gtt ctg cac cgg gcg       233

```

RAW SEQUENCE LISTING

DATE: 02/23/2006

PATENT APPLICATION: US/10/568,337

TIME: 08:02:48

Input Set : E:\61312.us.sequences.ST25.txt

Output Set: N:\CRF4\02232006\J568337.raw

```

299                               Met Leu Arg Val Leu His Arg Ala
300                               1           5
302 gcg tcc gcc ttg gtt atg gcg act gtg atc ggc ctt gcg ccc gcg gtc      281
303 Ala Ser Ala Leu Val Met Ala Thr Val Ile Gly Leu Ala Pro Ala Val
304      10           15           20
306 gcc ttt gcg tgc gat ctg ccg caa acc cac agc ctg ggt agc cgg cga      329
307 Ala Phe Ala Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg
308 25           30           35           40
310 acc ttg atg ctt ctg gca cag atg cgg cga atc tct ctt ttc tct tgc      377
311 Thr Leu Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys
312      45           50           55
314 tta aag gat cga cat gac ttc ggt ttc ccg cag gag gag ttc ggt aac      425
315 Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn
316      60           65           70
318 cag ttc caa aag gct gaa acc atc ccg gta ttg cat gag atg atc cag      473
319 Gln Phe Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln
320      75           80           85
322 cag atc ttc aac ctg ttc agc act aag gac tct tct gct gct tgg gat      521
323 Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp
324      90           95           100
326 gag acc ctg ctt gac aaa ttc tac act gaa ctg tac cag cag ctg aac      569
327 Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn
328 105           110           115           120
330 gac ctg gaa gcc tgc gtg atc cag ggt gtg ggt gtg act gag act ccg      617
331 Asp Leu Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro
332      125           130           135
334 ctg atg aag gag gac tct att ctg gct gtg cga aaa tac ttc caa cgg      665
335 Leu Met Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg
336      140           145           150
338 atc act ctg tat ctg aaa gag aag aaa tac agc ccg tgc gcc tgg gag      713
339 Ile Thr Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu
340      155           160           165
342 gtt gtc cga gca gaa atc atg ccg tct ttc tct ttg tct acc aac ttg      761
343 Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu
344      170           175           180
346 caa gaa tct tta cga agc aag gaa taa tacgcgtact agtgaattc      807
347 Gln Glu Ser Leu Arg Ser Lys Glu
348 185           190
351 <210> SEQ ID NO: 19
352 <211> LENGTH: 192
353 <212> TYPE: PRT
354 <213> ORGANISM: Artificial
356 <220> FEATURE:
357 <223> OTHER INFORMATION: Synthetic Construct
359 <400> SEQUENCE: 19
361 Met Leu Arg Val Leu His Arg Ala Ala Ser Ala Leu Val Met Ala Thr
362 1           5           10           15
365 Val Ile Gly Leu Ala Pro Ala Val Ala Phe Ala Cys Asp Leu Pro Gln
366      20           25           30

```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 02/23/2006
PATENT APPLICATION: US/10/568,337 TIME: 08:02:49

Input Set : E:\61312.us.sequences.ST25.txt
Output Set: N:\CRF4\02232006\J568337.raw

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,4,7,8,9,10,11,12,13,14,15,17,18,19

VERIFICATION SUMMARY

DATE: 02/23/2006

PATENT APPLICATION: US/10/568,337

TIME: 08:02:49

Input Set : E:\61312.us.sequences.ST25.txt

Output Set: N:\CRF4\02232006\J568337.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application No

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date